09/680,168

REMARKS

Claims 1-15 are all the claims pending in the application. Claims 1, 8 and 15 stand objected upon informalities. Claims 5, 10, 12 and 15 stand rejected upon informalities. Claims 1-15 stand rejected on prior art grounds. In addition, the drawings and specification are objected to. Applicants respectfully traverse these objections/rejections based on the following discussion.

I.   The 35 U.S.C. §112, Second Paragraph, Rejection

Claims 5, 10, 12 and 15 stand rejected under 35 U.S.C. §112, second paragraph. Applicant has amended the claims, as indicated above, in accordance with the Examiner's recommendations. In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw this rejection.

II.   The Prior Art Rejections

Claims 1, 5, 6, 10, 11 and 15 stand rejected under 35 U.S.C. §102(e) as being anticipated by Johansson, et al. ("Johansson") (U.S. Patent No. 6,480,505). Claims 2, 4, 7, 9, 12 and 14 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Johansson, et al. ("Johansson") (U.S. Patent No. 6,480,5050). Applicants respectfully traverse these rejections based on the following discussion.

A.   The Rejection Based on Johansson

Regarding claims 1, 5, 6, 10, 11 and 15, Johansson, et al. ("Johansson") fails to disclose, teach or suggest the features of independent claim 1, and similarly independent claims 6 and 11, including each baseband packet being of a size corresponding to one of a permitted set of capacities '$C_1, C_2, \ldots C_n$'. (See Page 12, lines 6-17; and Page 14, lines 16-21).

9

09/680,168

Indeed, Johansson merely teaches a system, and related apparatus, for transferring information in packets in a wireless communication network using polling. Contrary to the assertion in the Office Action, this system sends fragmented, small baseband packets, for example, through a conventional Bluetooth system where the packets are generally smaller than one time slot resulting in wasted time slots and degraded link utilization. In particular, "[w]hen data is tranferred on the Bluetooth TDD channel, one packet (must) first be sent from a master to a slave directly followed by a packet sent from a slave to a master. Moreover, the Bluetooth packet size used in either of the directions may occupy, for example, 1, 3, or 5 slots, where one slot is 0.625ms wide." Accordingly, Johansson does not disclose preferentially sending "mult-slot packets" like Applicant's invention. Therefore, Johansson does not disclose, teach or suggest including each baseband packet being of a size corresponding to one of a permitted set of capacities '$C_1, C_2, ... C_n$'. (See Office Action, Page 4, Section 13; Johansson at Abstract; Column 2, lines 30-48, Page 465 at Abstract; Page 467, 1st Column; and Figure 3).

Johansson is similar to the common applications running on Bluetooth having data packets of the order of kilobytes. However, the baseband packets that can be sent through the link in Bluetooth are very small in comparison, 339 bytes being the maximum. As a result, just after the application data packets are received, they need to be fragmented into baseband packets, which will be reassembled into application data packets at the receiving end. The L2CAP layer in Bluetooth is responsible for this purpose. Accordingly, the baseband packets can span 1, 3, or 5 transmission time slots. (See Page 12, lines 6-17).

In contrast, Applicant teaches discloses that if the application data packets are large, it would be wise to fragment into 5 timeslot packets so as to reduce the total transmission delay, whereas data packets smaller than one time slot, if fragmented as five time slot packets will waste time slots and hence degrade link utilization, for example, as taught by Johansson and other conventional applications. Accordingly, Applicant, as indicated above and below, discloses sending one large multislot packet, whereas Johansson merely teaches sending many small packets.

10

09/680,168

For emphasis, Applicant discloses a computer implemented system for transferring data, which is based on a SAR-Optimum-Slot-Utilization (SAR-OSU) algorithm. "This algorithm aims to decrease the transmission delay of L2CAP packets by reducing the queuing delay of baseband packets. The lesser the number of baseband packets per L2CAP packet, the lesser is the end-to-end delay since only a single baseband packet is sent each time a slave is polled. Hence this algorithm maximizes the data sent each time a slave is polled by preferentially sending multi-slot packets." Accordingly, Applicant's invention utilizes an algorithm where each baseband packet is of a size corresponding to one of a permitted set of capacities 'C₁, C₂, ... Cn'. (See Page 14, lines 14-21).

Based on the above, the Applicant traverses the assertion that Johansson teaches Applicant's invention of independent claims 1, 6 and 11, and related dependent claims 5, 10 and 15.

B.   The 35 U.S.C. Section 103(a) Rejection Based on Johansson

Regarding claims 2, 4, 7, 9, 12 and 14, as discussed above, Johansson does not teach or suggest the features of independent claim 1, and similarly independent claims 6 and 11, including each baseband packet being of a size corresponding to one of a permitted set of capacities 'C₁, C₂, ... Cn'.. (See above).

Since Johansson does not teach the above feature of independent claims 1, 6 and 11, Johansson is deficient, and does not teach or suggest the specific limitation of related dependent claim 7, and similarly dependent claims 2 and 12, including minimizing of the number of baseband packets created for each Link layer packet is by an SAR-OSU algorithm including converting the Link layer packet into as many baseband packets of highest capacity Cn as possible and repeating the conversion process on unconverted bytes using each successive lower capacity baseband packet size until all the unconverted bytes have been converted into baseband packets. Johansson further does not teach or suggest the specific limitations of dependent claims 4, 9 and 14. Accordingly, Applicant traverses the assertion that Johansson teaches these features.

11

09/680,168

For the reasons states above, dependent claims 2, 4, 7, 9, 12 and 14 are fully patentable over the cited reference.

III.   Formal Matters and Conclusion

With respect to the objections to the specifications and claims, the specification and claims have been amended, above, to overcome these objections. With respect to the objection to the drawings, Replacement Sheets are submitted herewith. In view of the foreign, the Examiner is respectfully requested to reconsider and withdraw the objections to the specification, claims and drawings.
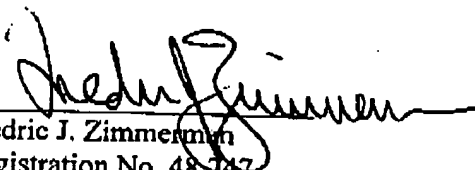
In view of the foregoing, Applicants submit that claims 1-15, all the claims presently pending in the application, are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary.

Please charge any deficiencies and credit any overpayments to Attorney's Deposit Account Number 09-0441.

Respectfully submitted,

Dated: 10\20\04

Fredric J. Zimmerman
Registration No. 48,747

McGinn & Gibb, PLLC
2568-A Riva Road, Suite 304
Annapolis, MD 21401
Customer Number: 29154

12